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10/687,425	10/16/2003	Jeffrey Eldon Fish	KCX-838 (18843)	7967
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/687,425

Applicant(s)

FISH ET AL.

Examiner

ARADHANA SASAN

Art Unit

1615

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-87 is/are pending in the application.
- 4a) Of the above claim(s) 78-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-77 and 81-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Application

1. The remarks and amendments filed on 05/16/08 are acknowledged.
2. Claims 1-55 were cancelled.
3. New claims 56-87 were added and are included in the prosecution.
4. Claims 78-80 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim.

Claim 78 is drawn to an alumina nanoparticle. The elected species of nanoparticle was a "silica" nanoparticle (see Remarks Page 2, filed 12/18/2006).

Claims 79-80 are drawn to metal ions selected from the group consisting of permanganate ion, chlorite ion, persulfate ion and combinations thereof. The elected species of metal ion was "copper ion" (see Remarks Page 2, filed 12/18/2006).

Response to Arguments

Rejection of claims 26 and 36 under 35 USC § 112, second paragraph

5. In light of Applicant's cancellation of claims 1-55, the rejection of claims 26 and 36 under 35 USC § 112, second paragraph is rendered moot. Applicant has removed the terms "less than about" and "at least about" from the newly presented claims.

Rejection of claims 26, 38-41 and 49 under 35 USC § 102(b)

6. Applicant's arguments, see Page 7, filed 05/16/08, with respect to the rejection of claims 26, 38-41 and 49 under 35 U.S.C. 102(b) as being anticipated by Rohrbaugh et al. (US 2002/0151634 A1) have been fully considered and are persuasive. Therefore,

the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Morman et al.* (US 2002/0004350 A1) and *Rohrbaugh et al.* (US 2002/0151634 A1).

Rejection of claims 34-37, 46-48 and 50 under 35 USC § 103(a)

7. Applicant's arguments, see Page 8, filed 05/16/08, with respect to the rejection of claims 34-37, 46-48 and 50 under 35 U.S.C. 103(a) as being unpatentable over *Rohrbaugh et al.* (US 2002/0151634 A1) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Morman et al.* (US 2002/0004350 A1) and *Rohrbaugh et al.* (US 2002/0151634 A1).

Rejection of claims 27-33, 42-45 and 51-55 under 35 USC § 103(a)

8. Applicant's arguments, see Page 8, filed 05/16/08, with respect to the rejection of claims 27-33, 42-45 and 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rohrbaugh et al.* (US 2002/0151634 A1) in view of *Morman et al.* (US 2002/0004350) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Morman et al.* (US 2002/0004350 A1), *Rohrbaugh et al.* (US 2002/0151634 A1) and *Alonso Fernandez et al.* (US 2001/0051189 A1).

Rejection of claims under Obviousness-type double patenting

9. The provisional rejection of claims 26, 39-41 and 50-55 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 40-

42, 47, 49 and 51 of copending Application No. 10/686,938 ('938 hereinafter) is withdrawn in light of the cancellation of claims 40-53 of '938.

10. The provisional rejection of claims 26, 37-41, 46-48 and 50-55 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 36-40, 52-56, 68, 70, 72 of copending Application No. 10/686,939 ('939 hereinafter) is withdrawn in light of the cancellation of claims 25-51 of '939.

11. Applicant's arguments, see Page 11, filed 05/16/08, with respect to the provisional rejection of claims 26, 39, 46-48 and 51-55 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31-32, 34, 36, 43, and 45 of copending Application No. 10/686,933 ('933 hereinafter), and the rejection of claims 26, 34-36, 46-48, 39-41 and 50-55 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 6-9, 14-15, 17, 19-22, 25-26, 29-30 and 34-35 of US 7,141,518 have been fully considered. Applicant argues that the present amendments overcome these rejections. This is not found persuasive because one with ordinary skill in the art would find the instant claims obvious over the claims of the co-pending applications and US Patent listed above. Applicants agreed to submitting terminal disclaimers for the above references, when the present application is otherwise in condition for allowance.

Until such time, the obviousness-type double patenting rejections will be maintained.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 56-73 and 84-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morman et al. (US 2002/0004350 A1) in view of Rohrbaugh et al. (US 2002/0151634 A1).

The claimed invention is a breathable film comprising a blend of a thermoplastic polymer, a filler, and nanoparticles. The nanoparticles have a diameter of about 500 nanometers or less and selected from the group consisting of silica, alumina, titanium dioxide, gold, zinc oxide, polystyrene, and combinations thereof. The nanoparticles are modified with a metal ion to form modified nanoparticles. The modified nanoparticles comprise a negative first Zeta Potential from about -1 to about - 50 millivolts and a second Zeta Potential being at least about 5.0 millivolts higher than the negative first Zeta Potential.

Morman teaches a breathable film that is used in a variety of personal care garments and protective garments (Abstract). Morman defines the term "breathable film" as a film having a water vapor transmission rate ("WVTR") of at least about 500 grams/m² – 24 hours (Page 2, [0017]). Morman discloses that the term "film" refers to a thermoplastic film and includes films rendered microporous by mixing polymer with filler, forming a film from the mixture, and stretching the film (Page 3, [0023]). Morman also

teaches laminates that are breathable to water vapor but substantially impermeable to liquid water are used in diaper backings and other personal care absorbent garments (Page 1, [0002]). Thermoplastic polymers such as polyolefins are disclosed (Page 4, [0042]). Filler particles including calcium carbonate, silica and alumina are disclosed (Page 5, [0049]). Example 1 discloses a film where the core layer contained 58% by weight of stearic acid coated calcium carbonate particles having a mean diameter of about 1 micron and a top cut of 7 microns (Page 9, [0088]).

Morman does not expressly teach nanoparticles blended with the thermoplastic polymer and filler.

Rohrbaugh teaches coating compositions comprising a nanoparticle system and articles of manufacture that create multi-use benefits to the modified surfaces including malodor control (Abstract). The soft surfaces that are coated include fabrics, such as nonwoven fabrics, garments, textiles and films (Page 2, [0025]). The soft surfaces may comprise fibers from mineral sources such as polyolefin fibers (Page 2, [0026]). Nonwoven fabrics are disclosed (Page 3, [0030] to [0031]). The nanoparticle diameter can be between 0nm and 750nm (Page 5, [0044]). It is also disclosed that inorganic nanoparticles generally exist as silicates (Page 5, [0046]). Surface molecules can be associated with surfaces of the nanoparticles (Page 5, [0045]). The surface of the nanoparticles may be "functionalized" by the association with charged functionalized surface molecules including multi-valent inorganic salts (such as salts of Cu^{+2}) (Page 8, [0069]). It is also disclosed that "the materials that have been subjected to a high energy surface treatment and have a plurality of nanoparticles deposited thereon can be

suitable for a great many uses including, but not limited to use to transport liquid in articles such as clothing containing hydrophobic or borderline hydrophilic fibers and in portions of disposable absorbent articles" (Page 14, [0139]). Examples 14-15 and 20-21 include nanoparticle coating compositions (Page 19, Tables 2 and 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a breathable film that is used in a variety of personal care garments and protective garments, as suggested by Morman, combine it with the use of modified silica nanoparticles in coating polyolefin fibers that are used in disposable absorbent articles, as suggested by Rohrbaugh, and produce the instant invention.

One of ordinary skill in the art would do this because Rohrbaugh teaches that articles of manufacture comprising a nanoparticle coating have multi-use benefits to the modified surfaces including malodor control (Abstract).

Regarding instant claim 56, the limitation of a breathable film would have been obvious over the breathable film taught by Morman (Abstract). The limitation of a blend of a thermoplastic polymer, a filler, and nanoparticles would have been obvious over the thermoplastic films made by mixing a thermoplastic polymer with filler, as taught by Morman (Page 3, [0023]) in view of the nanoparticle coating of soft surfaces such as polyolefin fibers, as taught by Rohrbaugh (Page 2, [0026]). The limitation of the diameter of the nanoparticles (500nm) would have been obvious over the nanoparticle diameter between 0nm and 750nm, as taught by Rohrbaugh (Page 5, [0044]). The limitation of the nanoparticles selected from the group consisting of silica, alumina, titanium dioxide, gold, zinc oxide, polystyrene, and combinations thereof would have

been obvious over the silicate nanoparticles taught by Rohrbaugh (Page 5, [0046]). The limitation of the nanoparticles modified with a metal ion would have been obvious over the surface of the nanoparticles that may be "functionalized" by the association with charged functionalized surface molecules including multi-valent inorganic salts, as taught by Rohrbaugh (Page 8, [0069]). The limitation of the modified nanoparticles comprising a negative first Zeta Potential from about -1 to about - 50 millivolts and a second Zeta Potential being at least about 5.0 millivolts higher than the negative first Zeta Potential would have been obvious over the silica nanoparticles taught by Rohrbaugh (Page 5, [0046]) because silica nanoparticles have a negative surface charge (Rohrbaugh, Page 6, [0049]) and therefore have a negative electrical potential or zeta potential. It is this negative surface charge or negative zeta potential that allows the silica nanoparticles to be associated or modified by a positively charged metal ion such as Cu^{2+} , which is taught by Rohrbaugh (Page 8, [0069]). The limitation of the range of the negative first zeta potential (claims 34-35) would have been obvious given the desired association with a metal ion. The limitation of a second zeta potential that is higher than the first zeta potential would have been obvious because once a positively charged metal ion modifies the surface of the nanoparticle, the first negative zeta potential will consequently be higher, depending on the desired amount of modification or addition of positively charged metal ions.

Regarding instant claims 57-58, the limitations of the filler comprising at least 35% by weight of the breathable film and the filler comprising from about 45% to about 65% by weight of the breathable film would have been obvious over the 10-55% by

volume of the filler, as taught by Morman (Page 11, claim 10). One with ordinary skill in the art would convert the % by volume of the filler into % by weight of the filler (based on the density of the filler) during the process of routine experimentation.

Regarding instant claim 59, the limitation of the average particle size of the filler of about 0.1 microns to about 10 microns would have been obvious over the mean particle diameter of the filler particles of about 0.1-7.0 microns, as taught by Morman (Page 5, [0049]).

Regarding instant claim 60, the limitation of the filler coated with a fatty acid would have been obvious over the stearic acid coated calcium carbonate particles, as taught by Morman (Page 9, Example 1, [0088]).

Regarding instant claims 61-62, the limitation of the filler would have been obvious over the fillers such as calcium carbonate, non-swellable clays, silica, alumina, barium sulfate, etc., as taught by Morman (Page 5, [0049]).

Regarding instant claim 63, the limitation of the negative first zeta potential of the nanoparticles from about -1 to about -20 millivolts would have been obvious over the silica nanoparticles taught by Rohrbaugh (Page 5, [0046]) because silica nanoparticles have a negative surface charge (Rohrbaugh, Page 6, [0049]) and therefore have a negative electrical potential or zeta potential. It is this negative surface charge or negative zeta potential that allows the silica nanoparticles to be associated or modified by a positively charged metal ion such as Cu^{2+} , which is taught by Rohrbaugh (Page 8, [0069]). The limitation of the range of the negative first zeta potential of about -1 to

about -20 millivolts would have been obvious given the desired association with a metal ion.

Regarding instant claim 64, the limitation of the silica nanoparticles would have been obvious over the silica nanoparticles taught by Rohrbaugh (Page 5, [0046]).

Regarding instant claims 65-66, the limitation of the metal ion would have been obvious over the Cu^{+2} used on the surface of the nanoparticles as taught by Rohrbaugh (Page 8, [0069]).

Regarding instant claims 67-68, the limitation of the WVTR of the breathable film would have been obvious over the breathable film having a water vapor transmission rate ("WVTR") of at least about 500 grams/ m^2 – 24 hours, as taught by Morman (Page 2, [0017]).

Regarding instant claims 69-71, the limitation of the surface area of the nanoparticles would have been obvious over the nanoparticles with a diameter between 0nm and 750nm, as taught by Rohrbaugh (Page 5, [0044]). The surface area is an inherent property of the nanoparticle and since the diameter of the nanoparticles is taught, the surface area of the nanoparticle is implicitly taught by Rohrbaugh. One with ordinary skill in the art would be able to calculate the surface area of the nanoparticles when the diameter of the nanoparticles is known.

Regarding instant claim 72, the limitation of a polyolefin as the thermoplastic polymer would have been obvious over the thermoplastic polymers such as polyolefins, as disclosed by Morman (Page 4, [0042]).

Regarding instant claim 73, the limitation of metal ions adsorbed onto the nanoparticles would have been obvious over the Cu^{+2} used on the surface of the nanoparticles as taught by Rohrbaugh (Page 8, [0069]).

Regarding instant claims 84-87, the limitation of a personal care product would have been obvious over the disposable absorbent articles taught by Rohrbaugh (Page 14, [0139]) and by the personal care absorbent articles and protective garments such as disposable diapers taught by Mormon (Page 1, [0007]). The limitation of a nonwoven fabric laminated to the film would have been obvious over the non-woven web that is bonded to the breathable film, as taught by Mormon (Page 1, [0006]).

14. Claims 74-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mormon et al. (US 2002/0004350 A1) in view of Rohrbaugh et al. (US 2002/0151634 A1) and Thunhorst et al. (US 2002/0022672 A1).

The teachings of Mormon and Rohrbaugh are stated above.

Morman and Rohrbaugh do not expressly teach the bonding of metal ions to the nanoparticles or the coupling of metal ions to the nanoparticles with an organofunctional silane.

Thunhorst teaches that the surface of silica nanoparticles can be treated with organosilanes, which are capable of attaching to the surface of the particles by a chemical bond or by a strong physical bond (Page 6, [0094]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a breathable film that is used in a variety of personal care garments and protective garments, as suggested by Morman, combine it with the use of modified silica nanoparticles in coating polyolefin fibers that are used in disposable absorbent articles, as suggested by Rohrbaugh, further combine it with the surface treatment of silica nanoparticles with organosilanes, as taught by Thunhorst, and produce the instant invention.

One of ordinary skill in the art would do this because Thunhorst teaches that organosilanes are preferred for surface treatment of silica nanoparticles (Page 6, [0094]).

Regarding instant claims 74-75, the limitation of the bonding of metal ions to the nanoparticles and the coupling of metal ions to the nanoparticles with an organofunctional silane would have been obvious over the surface treatment of silica nanoparticles with organosilanes, which are capable of attaching to the surface of the particles by a chemical bond or by a strong physical bond, as taught by Thunhorst (Page 6, [0094]).

15. Claims 76-77 and 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morman et al. (US 2002/0004350 A1) in view of Rohrbaugh et al. (US 2002/0151634 A1) and Alonso Fernandez et al. (US 2001/0051189 A1).

The teachings of Morman and Rohrbaugh are stated above.

Morman and Rohrbaugh do not expressly teach a positive first Zeta potential of the modified nanoparticles.

Alonso Fernandez teaches nanoparticles with a positive electrical charge (Page 4, claims 1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a breathable film that is used in a variety of personal care garments and protective garments, as suggested by Morman, combine it with the use of modified silica nanoparticles in coating polyolefin fibers that are used in disposable absorbent articles, as suggested by Rohrbaugh, further combine it with the positively charged nanoparticles, as taught by Alonso Fernandez, and produce the instant invention.

One of ordinary skill in the art would do this because one of ordinary skill in the art would choose from a finite number of predictable positively charged nanoparticles, such as the chitosan nanoparticles taught by Alonso Fernandez, with a reasonable expectation of success of producing a functional product that is a modified nanoparticle with a positive first Zeta potential.

Regarding instant claim 76, the limitation of the modified nanoparticles comprising a positive first Zeta potential from about 1 to about 70 millivolts would have been obvious over the nanoparticles taught by Rohrbaugh (Page 8, [0069]) in view of the positively charged nanoparticles taught by Alonso Fernandez (Page 4, claims 1-2).

Regarding instant claim 77, the limitation of the nanoparticles would have been obvious over the silicate nanoparticles (Page 5, [0046]) taught by Rohrbaugh, in view of the positively charged nanoparticles taught by Alonso Fernandez (Page 4, claims 1-2).

Regarding instant claim 81, the limitation of metal ions adsorbed onto the nanoparticles would have been obvious over the Cu⁺² used on the surface of the nanoparticles as taught by Rohrbaugh (Page 8, [0069]).

Regarding instant claims 82-83, the limitation of the bonding of metal ions to the nanoparticles and the coupling of metal ions to the nanoparticles with an organofunctional silane would have been obvious over the surface treatment of silica nanoparticles with organosilanes, which are capable of attaching to the surface of the particles by a chemical bond or by a strong physical bond, as taught by Thunhorst (Page 6, [0094]).

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a

terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 56, 64, 69-71, and 84-87 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31, 36, 43, and 45 of copending Application No. 10/686,933 ('933 hereinafter).

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 31-32, 34, 36, 43, and 45 of '933 are drawn to an absorbent article comprising a porous substrate which further contains nanoparticles formed from silica, having an average size of from about 1 to about 50 nanometers, and a surface area of from about 50 to about 1000 square meters per gram. The difference is that the claims of '933 do not include the metal ion in addition to the silica nanoparticles for odor absorption.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the absorbent article comprising silica nanoparticles of '933 and produce the instant invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18. Claims 56, 64-66, 69-71, and 84-87 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 6-9, 14-15, 17, 19-22, 25-26, 29-30, and 34-35 of U.S. Patent No. 7,141,518 ('518 hereinafter).

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-3, 6-9, 14-15, 17, 19-22, 25-26, 29-30, and 34-35 of '518 are drawn to a substrate comprising nanoparticles having a surface area of at least about 50 square meters per gram, the nanoparticles are modified with a metal ion and have a negative zeta potential prior to modification with the metal ion, the zeta potential of the modified nanoparticles is greater than the zeta potential of the nanoparticles prior to the modification, the substrate contains polyolefin fibers, a personal care product comprising the substrate and protective barrier clothing. The Specification of '518 discloses: "Laminates of breathable films and nonwoven fabrics also are considered to be within the teachings of this invention provided at least one of the layers contains absorbing, high surface area materials" (Col. 3, lines 27-30).

Since the instant application claims a film comprising high surface area silica nanoparticles with a metal ion, with zeta potential higher after the metal ion was adsorbed on the surface of the nanoparticle, used in a personal care product such as a diaper or adult incontinence product it is obvious over the claims of '518 and thus they are not patentably distinct over each other.

Conclusion

19. No claims are allowed.
20. Since this new rejection was necessitated by applicant's amendment, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aradhana Sasan whose telephone number is (571) 272-9022. The examiner can normally be reached Monday to Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Aradhana Sasan/
Examiner, Art Unit 1615

/MP WOODWARD/
Supervisory Patent Examiner, Art Unit 1615